At the outset, applicants and their attorneys wish to thank Examiner Ewoldt for the courtesy of the recent interview on February 7, 2002 with Dr. Jacques Bartholeyns and the applicants' attorney and agent. Examiner Ewoldt's careful attention to the application at the interview is greatly appreciated.

In the outstanding Official Action of March 15, 2002, the Examiner imposed an election of species requirement. The outstanding Official Action required that a specific chemical ligand be elected, such as one of those listed in claim 69. Applicants hereby provisionally elect the chemical ligand IL-13. However, with the cancellation of claim 87, it is respectfully submitted that this election of species is now moot. All claims directed to the process of the present invention have been canceled without prejudice and will be pursued in a subsequent application.

As stated in the outstanding Official Action, all the pending product claims are considered to be generic. As such, it is respectfully submitted that claims 44-47, 49-51, 53-55, 58, 60 and 61, are generic and should be examined together.

By the present amendment, the remaining independent claims 44 and 55 are amended herewith in the manner presented and discussed at the interview of February 7, 2002.

In addition, the article "Recent advances in the study of dendritic cells and follicular dendritic cells" by CAUX et al. is submitted herewith as evidence that the monocyte-derived cells

of the present invention are distinct from known dendritic cells. Specifically, it is noted that the article by CAUX et al. teaches that dendritic cells lack CD14 (page 2, middle column). As the monocyte-derived antigen-presenting cells (MD-APCs) of the present invention clearly present CD14 on their cell surface, the MD-APCs of the present invention are clearly distinct from dendritic cells.

In the previous Official Action, claims 44-66, 75, 76, 80 and 81 were rejected for allegedly being anticipated by or, alternatively, rendered obvious by UNANUE ("Macrophages, Antigen-Presenting Cells, and the Phenomena of Antigen Handling and Presentation, Department of Pathology, 1989). That rejection is respectfully traversed for the following reasons.

The article by UNANUE underscores the differences of the MD-APCs of the present invention from macrophages. It is clear that the MD-APCs of the present invention have a greater capability for stimulating proliferation of allogenic lymphocytes relative to standard macrophages.

At the interview, it was noted that the MD-APCs of the present invention derive their unique properties from their method of production. As such, it was noted that a product-by-process claim would be proper. As was also pointed out in the interview, when a product or article of manufacture is novel and patentable but cannot be appropriately defined except by the

process by which it is produced, a claim to such a product thus defined is proper.

It is respectfully submitted that the present amendment plainly distinguishes claims 44 and 55 from the cited prior art which relates merely to tissue macrophages that are neither isolated nor cultured. The present amendment recites MD-APCs that are produced by differentiating blood monocytes in vitro and in the presence of ligands enhancing the capacity of said MD-APCs for MHC-I antigen presentation relative to standard macrophages.

As noted in previous responses, the recitation "relative to standard macrophages" that appears in amended claims 44 and 55 has been approved in other granted patents for this assignee. For example, the Examiner's attention is directed to U.S. Patent Nos. 6,001,351 and 5,662,899.

In view of the present amendment and the foregoing remarks, therefore, it is believed that this application is now in condition for allowance, with claims 44-47, 49-51, 53-55, 58 and 60-61 as amended. Allowance and passage to issue on that basis are accordingly respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 44 has been amended as follows:

--44. (thrice amended) Monocyte-derived antigen-presenting cells (MD-APCs) which have a higher phagocytic capacity than mature dendritic cells and which have capacity for MHC class I (MHC-I) and MHC class II (MHC-II) antigen presentation,

said MD-APCs having been produced by differentiating blood monocytes in vitro, in the presence of ligands enhancing the capacity of said MD-APCs for MHC-I antigen presentation relative to standard macrophages,

said MD-APCs having a greater capability of stimulating proliferation of allogenic lymphocytes relative to standard macrophages.--

Claim 55 has been amended as follows:

--55. (thrice amended) Monocyte-derived antigen-presenting cells (MD-APCs) which present the following properties:

(a) the presence on the MD-APC cell surface of surface antigens CD80 and CD86;

(b) the presence on the MD-APC cell surface of surface antigen CD14, and

(c) a higher phagocytic capacity than mature dendritic cells,

said MD-APCs having been produced by differentiating blood monocytes in vitro, in the presence of ligands enhancing [he] the capacity of said MD-APCs for MHC-I antigen presentation relative to standard macrophages,

said MD-APCs having a greater capability of stimulating proliferation of allogenic lymphocytes relative to standard macrophages.--